

IN THE CLAIMS

The following listing of the claims is provided in accordance with 37 C.F.R. § 1.121.

1. (currently amended) A method for performing new material development, the method comprising:

receiving a user simulation scenario from a user, wherein:

said user simulation scenario is in a-cyclic graph format and includes a plurality of material development modules represented as vertices including a starting module;

each said vertex includes data information including at least one input file source and at least one output file destination;

relationships between said modules are represented as edges;

each said edge includes at least one of previous module and subsequent module;
and

each said edge includes data flow information between said previous module and said subsequent module;

receiving a request to invoke said user simulation scenario, wherein said request includes said input file source for said starting module; ~~and~~

traversing said vertices along said edge in response to receiving said request and to said data flow information, wherein said traversing includes executing said modules associated with each said vertex beginning with said starting module in an order specified by said edges and said executing results in data being written to said output file destination for each said vertex; and

outputting the results in a tangible form.

2. (original) The method of claim 1 further comprising creating said user simulation scenario, wherein said creating includes:

receiving said plurality of material development modules and said edges from said user wherein said plurality of material development modules and said edges are selected from a library of available material development modules and associated edges;

verifying that said plurality of material development modules and said edges form a subset of a scenario library;

generating said user simulation scenario in response to said verifying; and

confirming with said user that said user simulation scenario is correct in response to said generating.

3. (original) The method of claim 2 wherein said scenario library includes said library of available material development modules and all possible relationships between said material development modules represented in a-cyclic graph format.

4. (original) The method of claim 1 further comprising providing the results of said traversing to said user.

5. (original) The method of claim 4 wherein said providing includes allowing said user to browse all or a subset of said data written to said output file destination for each said vertex and said input file source.

6. (original) The method of claim 4 wherein said providing includes transmitting all or a subset of said data written to said output file destination for each said vertex and said input file source.

7. (original) The method of claim 1 further comprising providing said user with access to a common materials development database that includes said data written to said output file destination for each said vertex and said input file source.

8. (original) The method of claim 7 wherein said common materials development database includes material related data, design data and integration data.

9. (original) The method of claim 7 wherein said common materials development database is in a relational database format.

10. (original) The method of claim 7 wherein said common materials development database includes said data information.

11. (original) The method of claim 1 wherein said user is a designer.

12. (original) The method of claim 1 wherein said user is a material developer.

13. (original) The method of claim 1 wherein said user is a customer.

14. (original) The method of claim 1 wherein said user is a supplier.

15. (original) The method of claim 1 wherein said material development modules include a process and producibility module.

16. (original) The method of claim 1 wherein said material development modules include a material module.

17. (original) The method of claim 1 wherein said material development modules include a property module.

18. (original) The method of claim 1 wherein said material development modules include a cost and performance model.

19. (original) The method of claim 1 wherein said material development modules include an error propagation model.

20. (canceled)

21. (currently amended) A system for performing new material development, the system comprising:

a network;

a user system in communication with said network;

a first storage device including a database component; and

a first host system in communication with said network and said storage device, said first host system including an integration component ~~to implement a method comprising~~ configured to:

~~receiving~~ receive a user simulation scenario from a user system via said network, wherein:

said user simulation scenario is in a-cyclic graph format and includes a plurality of material development modules represented as vertices including a starting module;

each said vertex includes data information including at least one input file source and at least one output file destination;

relationships between said modules are represented as edges;

each said edge includes at least one of previous module and subsequent module;

and

each said edge includes data flow information between said previous module and said subsequent module;

~~receiving~~ receive a request to invoke said user simulation scenario via said network, wherein said request includes said input file source for said starting module; ~~and~~

~~traversing~~ traverse said vertices along said edges in response to receiving said request and to said data flow information, wherein said traversing includes executing said

modules associated with each said vertex beginning with said starting module in an order specified by said edges and said executing results in data being written to said output file destination located on said database component for each said vertex; and
output the results in a tangible form.

22. (original) The system of claim 21 further including a second host system in communication with said network and wherein said second host system includes one of said plurality of material development modules.

23. (original) The system of claim 21 further including a second storage device in communication with said network and wherein a portion of said database component is located on said second storage device.

24. (original) The system of claim 21 wherein said network is the Internet.

25. (original) The system of claim 21 wherein said network is an intranet.

26. (original) The system of claim 21 wherein said network is a LAN.

27. (original) The system of claim 21 wherein said network is a WAN.

28. (currently amended) A ~~computer program product~~ tangible medium for performing new material development, the ~~computer product~~ tangible medium comprising:
a storage medium readable by a processing circuit and storing instructions for execution by the processing circuit ~~for performing a method comprising~~ configured to:
~~receiving~~ receive a user simulation scenario from a user, wherein:
said user simulation scenario is in a-cyclic graph format and includes a plurality of material development modules represented as vertices including a starting module;

each said vertex includes data information including at least one input file source and at least one output file destination;

relationships between said modules are represented as edges;

each said edge includes at least one of previous module and subsequent module;

and

each said edge includes data flow information between said previous module and said subsequent module;

~~receiving~~ receive a request to invoke said user simulation scenario, wherein said request includes said input file source for said starting module; ~~and~~

~~traversing~~ traverse said vertices along said edges in response to receiving said request and to said data flow information, wherein said traversing includes executing said modules associated with each said vertex beginning with said starting module in an order specified by said edges and said executing results in data being written to said output file destination for each said vertex; and

output the results in a tangible form.

29. (currently amended) The ~~computer program product~~ tangible medium of claim 28, wherein said ~~computer program product~~ instructions are built based on an object oriented framework.

30. (new) A computer-implemented method for performing new material development comprising:

collaborating material development data and simulation results between a plurality of users including a product designer and a material developer;

integrating the material development data and simulation results at a central location; and

outputting the material development data and simulation results on a tangible medium.

31. (new) The computer-implemented method of claim 30, wherein collaborating comprises collaborating data between a supplier and an external customer.

32. (new) The computer-implemented method of claim 30, wherein integrating comprises integrating material testing data.

33. (new) The computer-implemented method of claim 30, wherein integrating comprises integrating design data.

34. (new) The computer-implemented method of claim 30, wherein outputting comprises outputting the data and simulation results on a storage medium readable by a processing circuit.

35. (new) A centralized computer, comprising:
an integration system configured to:
collaborate material development data and simulation results between a plurality of users including a product designer and a material developer;
integrate the material development data and simulation results at a central location; and
output the material development data and simulation results on a tangible medium.

36. (new) The centralized computer of claim 35, wherein the plurality of users comprises a supplier and an external customer.

37. (new) The centralized computer of claim 35, wherein the data comprises material testing data.

38. (new) The centralized computer of claim 35, wherein the data comprises design data.

39. (new) The centralized computer of claim 35, wherein the tangible medium comprises a storage medium.